

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55/70/64	82D-I	ST CLAIR	4	1
		ILLINOIS	CONTRACT NO. 76C96	

**INDEX OF SHEETS**

1. COVER SHEET
2. TRAFFIC CONTROL
3. PLAN AND REMOVAL DETAILS
4. DETAILS

**HIGHWAY STANDARDS**

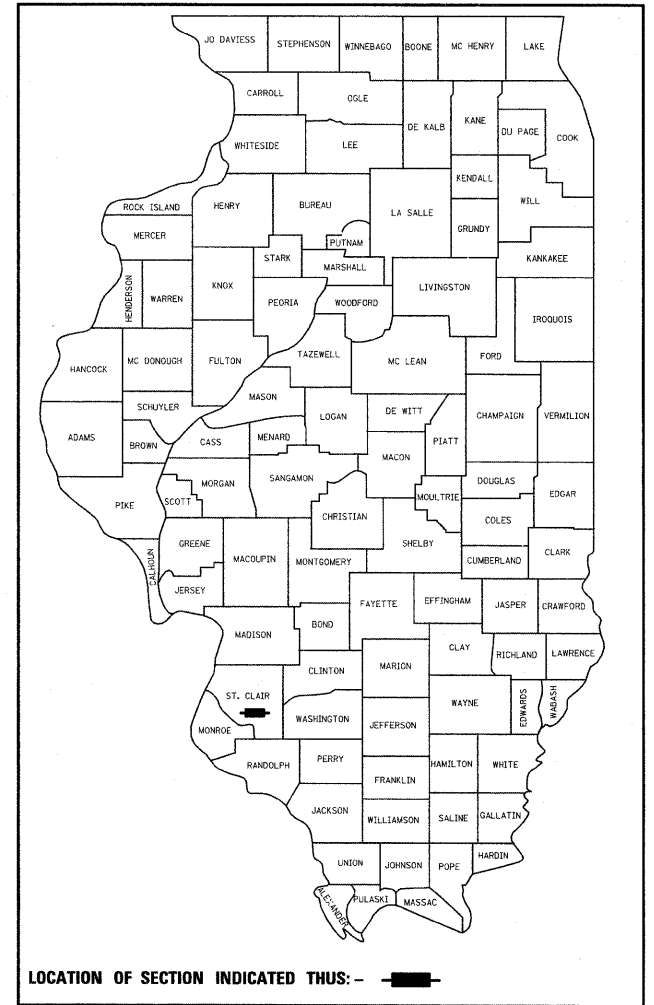
- 000001-05
- 001001-02
- 001006
- 701400-03
- 701401-05
- 701446-01

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**PROPOSED**  
**HIGHWAY PLANS**

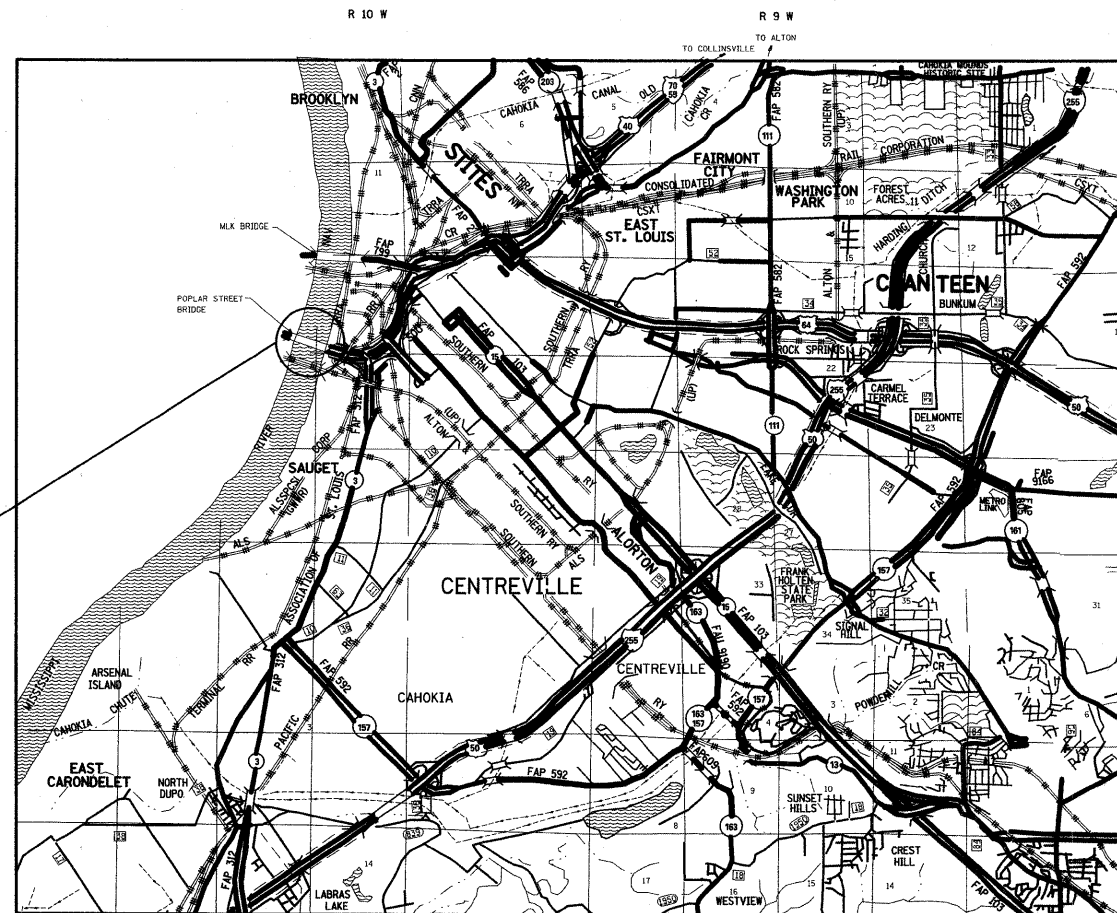
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**SECTION 82D-I**  
**HOAN DETAIL RETROFIT**  
**ST CLAIR COUNTY**

C-98-037-09

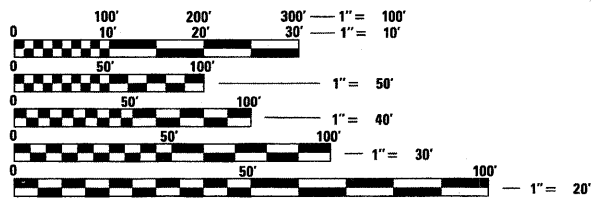
D-98-041-09



SUMMARY OF QUANTITIES			URBAN	100% STATE
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	SFTY-2A
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	16,160	16,160
50501110	STRUCTURAL STEEL REMOVAL	POUND	1,290	1,290
67100100	MOBILIZATION	L SUM	1	1
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	3	3
70100430	TRAFFIC CONTROL AND PROTECTION, STANDARD 701446	EACH	5	5
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1



PROJECT LOCATION  
 POPLAR STREET COMPLEX

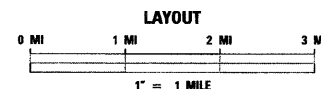


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
 1-800-892-0123  
 OR 811

PROJECT ENGINEER: PATTI LEBEAU (618) 346-3179  
 PROJECT MANAGER: ART MUEHLFELD (618) 346-3209

CONTRACT NO. 76C96



TRAFFIC DATA  
 ROADWAY D  
 ADT: 19300 (2009)  
 23500 (2029)  
 SU: 5.0%  
 MU: 15.3%

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

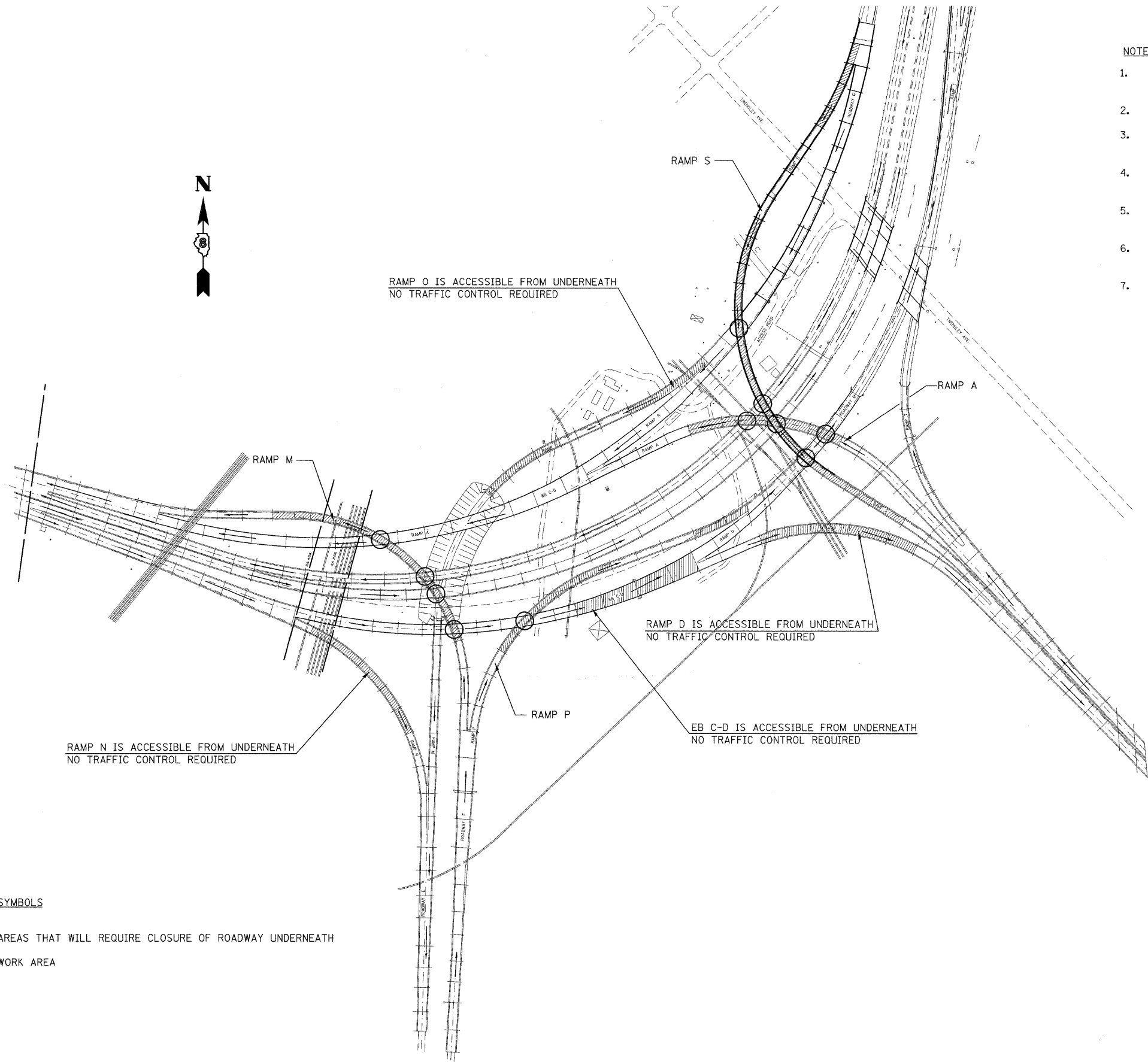
SUBMITTED March 17 2009

May C Jamie  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 8, 20 09  
Charles J. Ingersoll  
 ENGINEER OF DESIGN AND ENVIRONMENT

May 8, 20 09  
Christine M. Reed  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS**



RAMP O IS ACCESSIBLE FROM UNDERNEATH  
NO TRAFFIC CONTROL REQUIRED

RAMP D IS ACCESSIBLE FROM UNDERNEATH  
NO TRAFFIC CONTROL REQUIRED

EB C-D IS ACCESSIBLE FROM UNDERNEATH  
NO TRAFFIC CONTROL REQUIRED

RAMP N IS ACCESSIBLE FROM UNDERNEATH  
NO TRAFFIC CONTROL REQUIRED

**NOTES:**

1. CLOSE WB C-D (STD 701446) AND RAMP FROM EAST ST. LOUIS- MAIN STREET (STD 701401) AND REPAIR THE PORTION OF RAMPS M AND S GOING OVER WB C-D
2. CLOSE RAMP A (STD 701401) AND REPAIR THE PORTION OF RAMP S GOING OVER RAMP A
3. CLOSE WB MAINLINE (STD 701446) AND REPAIR THE PORTION OF RAMPS M, A, AND S GOING OVER THE MAINLINE
4. CLOSE EB MAINLINE (STD 701446) AND REPAIR THE PORTION OF RAMPS M, AND A GOING OVER THE MAINLINE
5. CLOSE EB C-D (STD 701446) AND REPAIR THE PORTION OF RAMPS M, AND P GOING OVER EB C-D
6. CLOSE EB C-D (STD 701446) AND RAMP P (STD 701401) AND REPAIR THE PORTION OF RAMP S AND A OVER THE EB C-D.
7. PEAK HOURS RESTRICTIONS AND PENALTIES ARE INCLUDED IN THIS PROJECT. SEE SPECIAL PROVISIONS

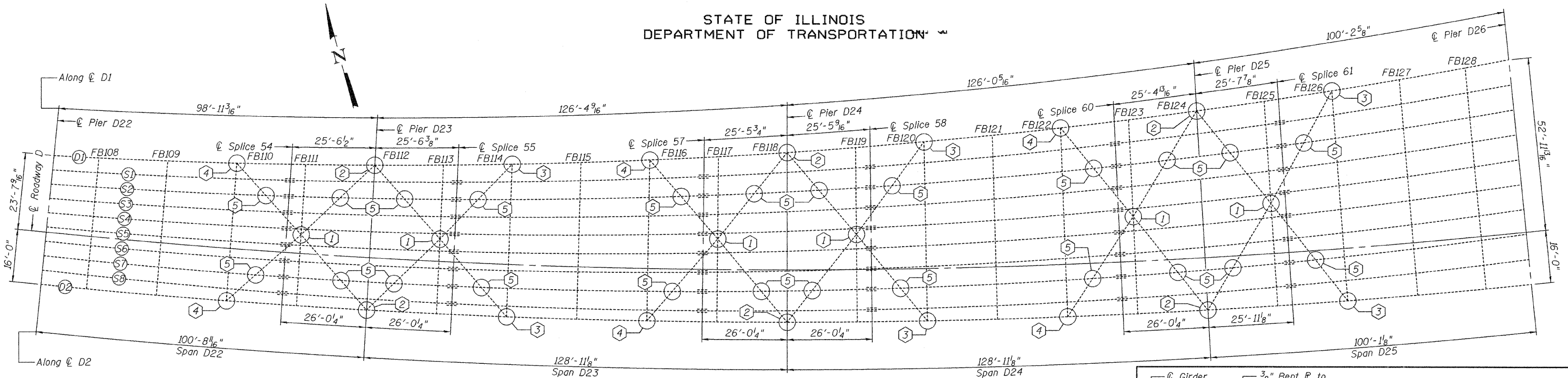
**SYMBOLS**

- AREAS THAT WILL REQUIRE CLOSURE OF ROADWAY UNDERNEATH
- ▨ WORK AREA

DRAWING IS NOT TO SCALE!

FILE NAME =	USER NAME = gelinh	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC CONTROL</b>				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ot\pw_work\pwidot\gelinh\d0120426\087606	6-sh-t-staging.dgn	DRAWN -	REVISED -		SCALE: NTS	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____	55/70/64	82D-I	ST CLAIR	4	2	
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -		<b>CONTRACT NO. 76C96</b>								
	PLOT DATE = 3/26/2009	DATE -	REVISED -		ILLINOIS FED. AID PROJECT								

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**FRAMING PLAN**

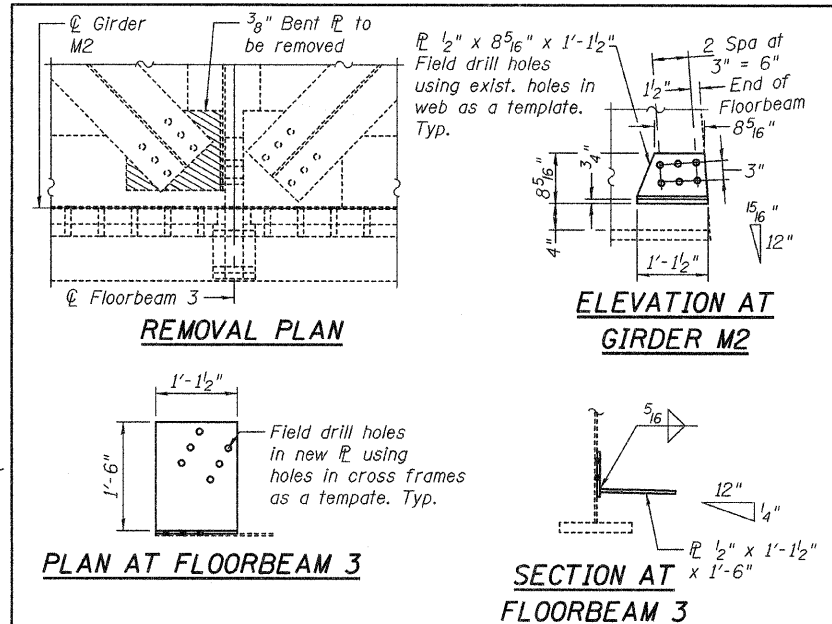
- ① Remove and Replace welded gusset P (6 Locations)
- ② Remove and Replace bolted bent P (6 Locations)
- ③ Remove and Replace welded gusset P (6 Locations)
- ④ Remove and Replace bolted bent P (6 Locations)
- ⑤ Install Vertical tie rods between cross-bracing and stringer (24 Locations as shown above) See Table for additional locations.

**GENERAL NOTES**

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.  
Fasteners shall be high strength bolts. Bolts 7/8"φ, open holes 15/16"φ, unless otherwise noted.  
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.  
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".  
All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

**ADDITIONAL LOCATIONS FOR REPAIR 5**

Structure #	Spans	Locations	Comments
Roadway A 082-0141	A21 - A24	14	RR span A26 and Traffic control at spans A26, A27 & A28 Shown on Plan View Above
	A25 - A28	56	
Roadway D 082-0144	D22 - D25	24	RR Span D30 and Traffic control at span D31
	D28 - D32	72	
Roadway F 082-0204	F7 - F9	16	Traffic control at span S5
	S1 - S3	28	
	S4 - S7	28	
	S8 - S10	28	
	S11 - S15	56	
	S16 - S18	32	
Ramp S 082-0142	S19 - S21	16	Traffic control at spans S12, S14 & S15 Traffic control at span S17 Traffic control at span S20
	M4 - M6	32	
	M7 - M9	32	
	M10 - M12	32	
Ramp M 082-0145	M13, M14 & A5M	26	Traffic control at spans M8 & M9
	N1 - N4	44	
Ramp N 082-0202	O1 - O3	36	RR at span N1 RR at span O2
	O4 - O6	14	
Ramp O 082-0201	O8 - O10	32	Traffic control at span P5 RR at span P7
	P4 - P6	28	
Ramp P 082-0203	P7 - P9	26	RR at span P7
	P10 - P13	26	
	Total	698	



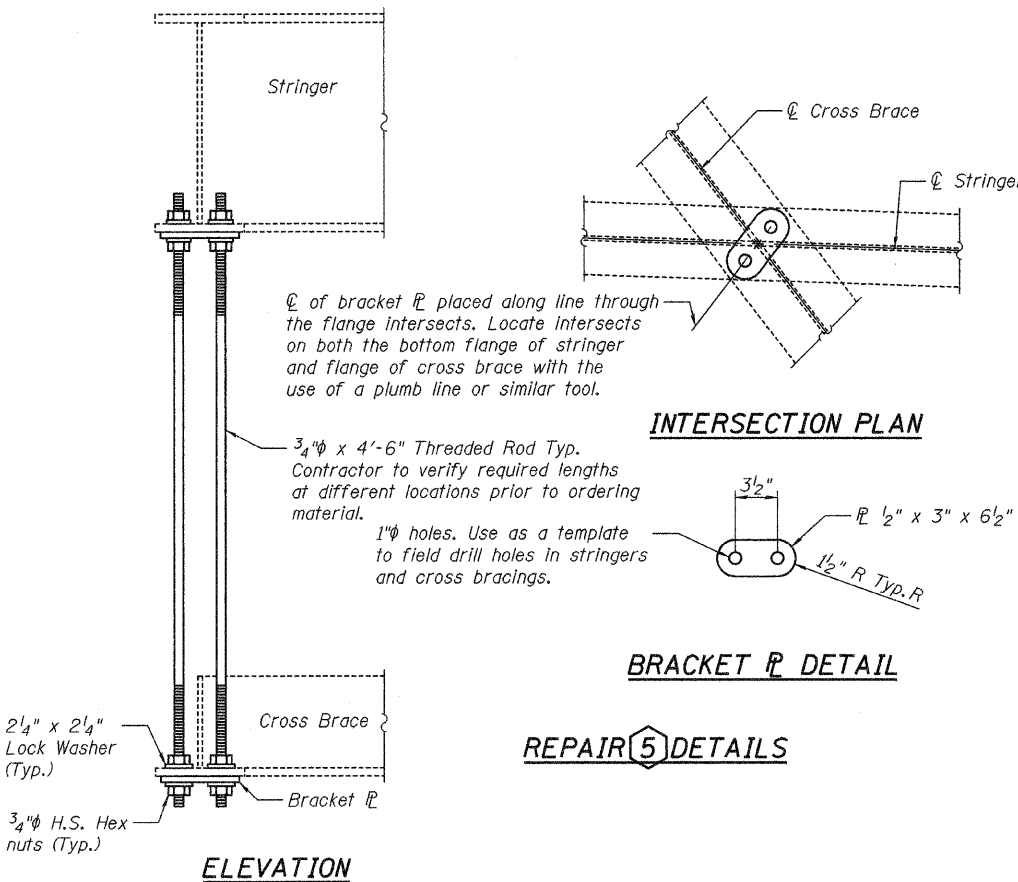
**SN 082-0145 RAMP M  
GIRDER M2 FLOORBEAM 3  
SOUTH END WEST SIDE REPAIR**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Steel Removal	Pound	1,290
Furnishing and Erecting Structural Steel	Pound	16,160

**PLAN AND REMOVAL DETAILS  
SN 082-0144**

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1	ΔΔ	82D-I	St. Clair	4	3
2 SHEETS		CONTRACT NO. 76C96			
		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		



**REPAIR 5 DETAILS**

DESIGNED Adrian T. Holloway  
CHECKED Victor H. Veliz  
DRAWN [Signature]  
CHECKED VHV AJH

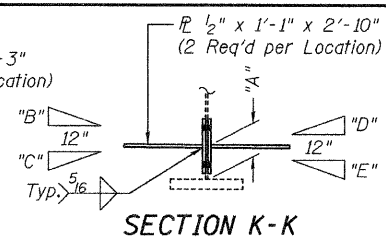
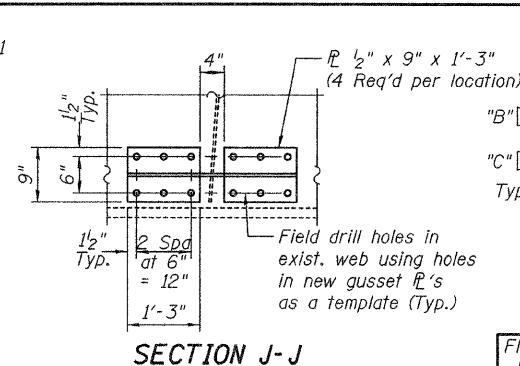
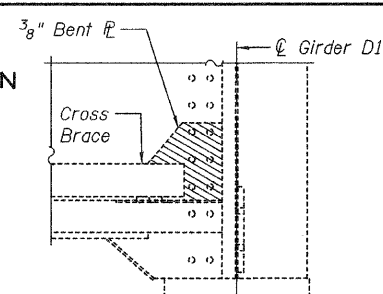
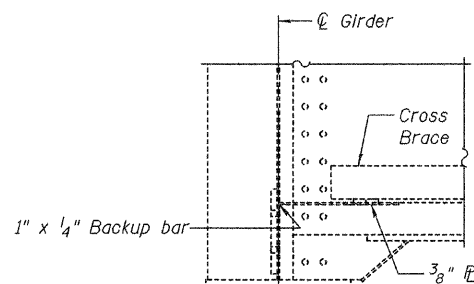
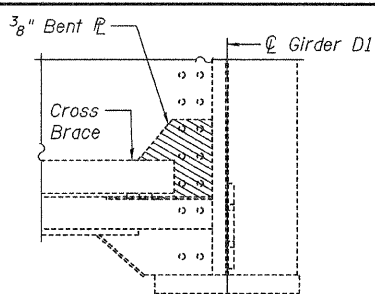
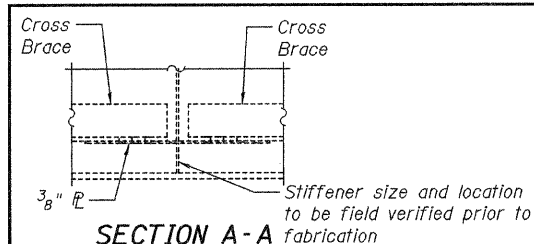
May 7, 2009  
EXAMINED [Signature]  
PASSED [Signature]  
ENGINEER OF STRUCTURAL SERVICES  
ENGINEER OF BRIDGES AND STRUCTURES



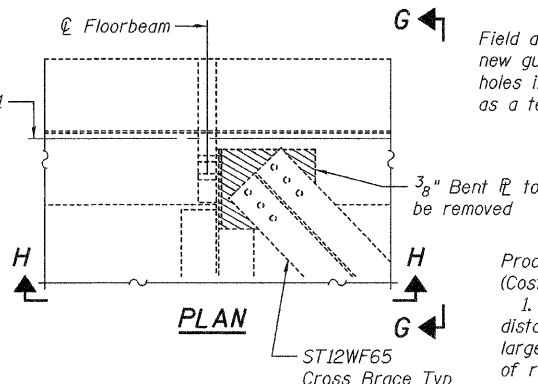
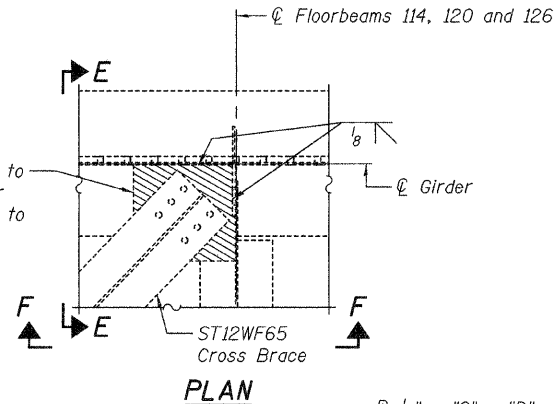
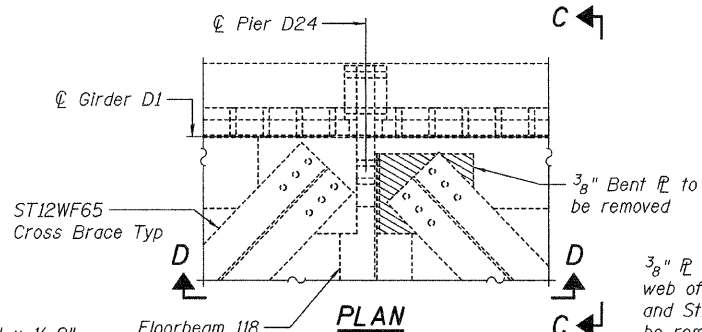
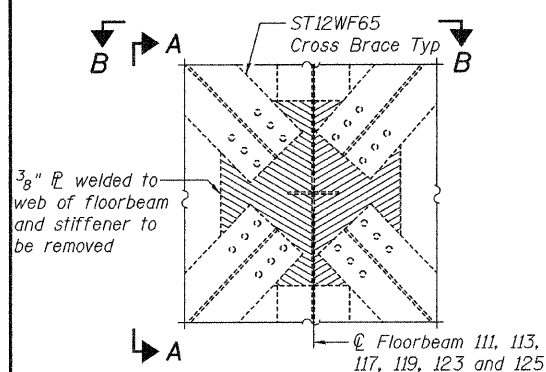
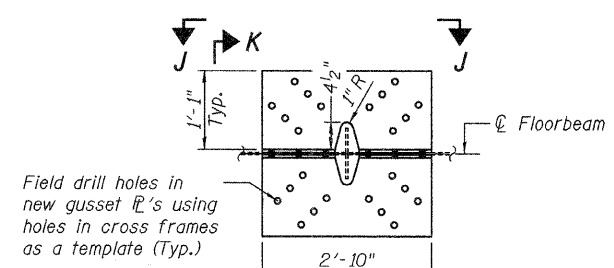
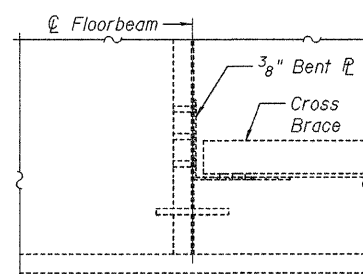
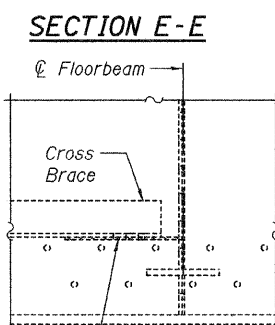
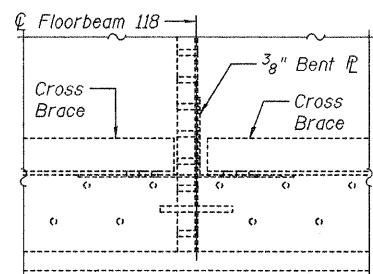
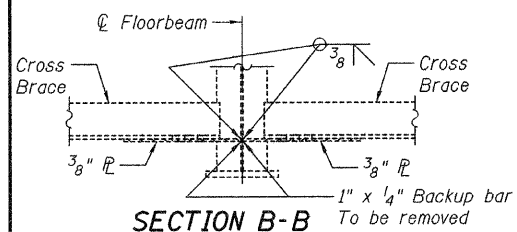
Expires: November 30, 2010

ΔΔ 55/70/64

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



Floorbeam Number	Dimensions Repair 1				
	"A"	"B"	"C"	"D"	"E"
111	5 3/4"	16"	-	-	16"
113	5 7/8"	16"	-	-	16"
117	6 1/8"	0	0	0	1/2"
119	5 1/2"	-	16"	16"	-
123	5 3/4"	0	0	1/2"	-
125	5 7/8"	-	1/8"	1/8"	-



Procedure for Gusset Flange Removal Repairs 1 and 3 (Cost included with Structural Steel Removal)

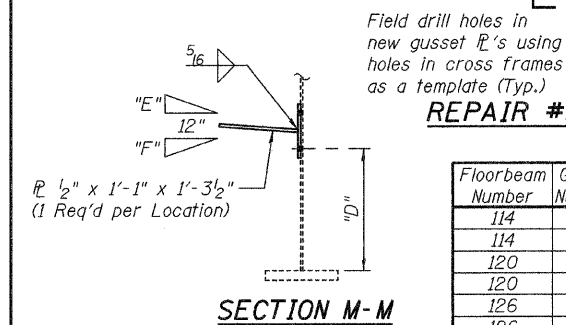
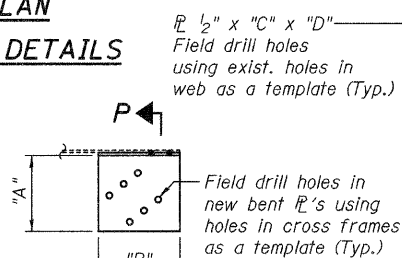
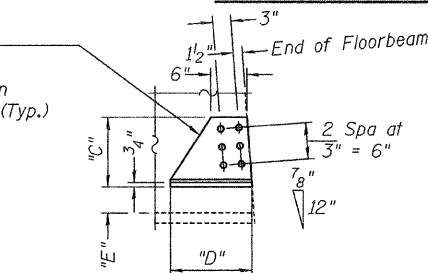
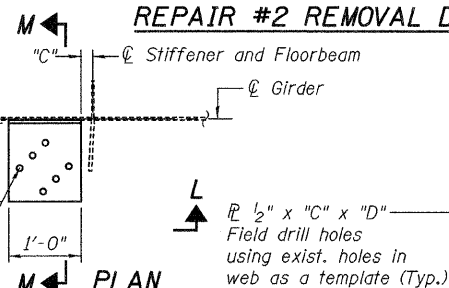
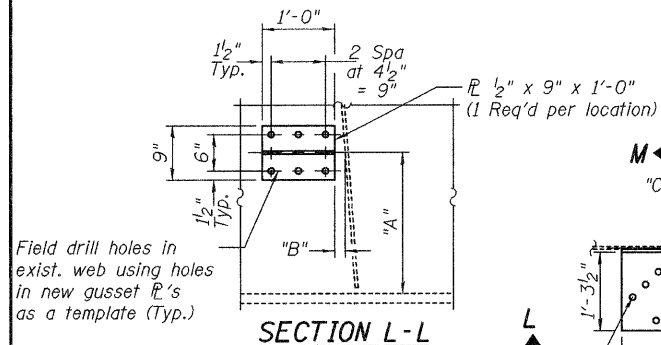
1. Remove existing 3/8" connecting plate. The minimum distance from cut to face of web or stiffener shall be the larger of 1/4" or web/stiffener to flange weld size, with removal of remaining material including the backup bar by grinding as described below. The cut shall be made parallel to the web and stiffener without angling the cut towards the web and stiffener. Equipment and method of cutting shall be approved by the Engineer. Any method of removal to be used shall ensure that no damage is done to the existing web, vertical stiffener or welds connecting these elements. Cutting shall be done in a manner such that the paint on the opposite face of the web and stiffener is not damaged. If damage occurs, the damaged area shall be repainted at the contractor's expense and procedures shall be modified to prevent damage at subsequent removal locations.
2. Remove material between cut and web/stiffener by grinding and grind smooth at web/stiffener surface. Web/stiffener flange surfaces shall have a roughness average (Ra) of 250 μin. or less. Grinding equipment shall be approved by the Engineer. The grinding operation should not gouge the girder web/stiffener flange.
3. The web/stiffener surface at the modification shall be inspected using dye penetrant or magnetic particle (MT) methods. Any cracks found shall be identified and reported to the Bureau of Bridges and Structures for further disposition.

REPAIR #1 REMOVAL DETAILS

REPAIR #2 REMOVAL DETAILS

REPAIR #3 REMOVAL DETAILS

REPAIR #4 REMOVAL DETAILS



REPAIR #3 DETAILS

Floorbeam Number	Girder Number	Dimensions Repair 3					
		"A"	"B"	"C"	"D"	"E"	"F"
114	D1	1'-11 1/2"	1 3/4"	2"	1'-8 1/4"	1/8"	-
114	D2	1'-11 1/2"	1 3/4"	1 3/8"	1'-8 1/4"	-	1/8"
120	D1	11 1/4"	1 3/4"	2"	8"	1/8"	-
120	D2	11 1/4"	1 3/4"	2"	8"	-	1/8"
126	D1	11 1/4"	1 3/4"	2"	8"	5/8"	-
126	D2	11 1/4"	1 1/8"	1 3/8"	8"	-	3/4"

PLAN AT D1 (D2 Opposite Hand)

ELEVATION AT GIRDER D1 (Looking West)

Floorbeam Number	Girder Number	Dimensions Repair 2						
		"A"	"B"	"C"	"D"	"E"	"F"	"G"
112	D1	12 1/2"	15 3/4"	11 1/2"	15 3/8"	4 3/8"	-	1/6"
112	D2	12 1/2"	15 3/4"	12 1/8"	16 3/8"	4 3/8"	-	1/6"
118	D1	12 1/2"	15 3/4"	11 1/2"	15 3/8"	4 1/4"	0"	0"
118	D2	12 1/2"	15 3/4"	12 1/8"	16 3/8"	4 1/4"	0"	0"
124	D1	12 1/2"	15 3/4"	11 1/2"	15 3/8"	4 1/2"	1/8"	-
124	D2	12 1/2"	15 3/4"	12 1/8"	16 3/8"	4 1/2"	1/8"	-

Floorbeam Number	Girder Number	Dimensions Repair 4						
		"A"	"B"	"C"	"D"	"E"	"F"	"G"
110	D1	13 1/2"	13 1/2"	11 1/2"	13 3/8"	4 1/2"	-	1/6"
110	D2	13 1/2"	13 1/2"	12 1/8"	14 3/8"	4 1/2"	-	1/6"
116	D1	13 1/2"	13 1/2"	11 1/2"	13 3/8"	4 1/2"	-	1/6"
116	D2	13 1/2"	13 1/2"	12 1/8"	14 3/8"	4 1/2"	-	1/6"
122	D1	13 1/2"	13 1/2"	11 1/2"	13 3/8"	4 3/8"	0"	0"
122	D2	13 1/2"	13 1/2"	12 1/8"	14 3/8"	4 3/8"	0"	0"

DESIGNED A.T.H.  
CHECKED V.H.V.  
DRAWN Drew Christopher  
CHECKED A.T.H. V.H.V.

May 7, 2009  
EXAMINED Carl P. Jones  
ENGINEER OF STRUCTURAL SERVICES  
PASSED Ralph E. Anderson  
ENGINEER OF BRIDGES AND STRUCTURES

DETAILS  
SN 082-0144

SHEET NO. 2 2 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	ΔΔ	82D-I	St. Clair	4	4
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 76C96	

REPAIRS 2 AND 4 DETAILS

ΔΔ 55/70/64